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Yuepeng Chen

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EXAMINER

HO, CHUONG T

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/566,739 | <b>Applicant(s)</b><br>CHEN ET AL. |  |
|                              | <b>Examiner</b><br>CHUONG T. HO      | <b>Art Unit</b><br>2419            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,8,10-16,20-23,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-23,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 1,2,4,5,8,10-16,20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The amendment filed 06/30/09 have been entered and made of record.
2. Applicant's arguments with respect to claims 1, 2, 4, 5, 8,10-16,20, 21-22, 23, 25-26 have been considered but are moot in view of the new ground(s) of rejection.
3. Claims 1, 2, 4, 5, 8,10-16,20, 21-22, 23, 25-26 are pending.
4. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 21 is recites the limitation " create a first Keep Active (KA) timer, add 1 to timeout times of the first KA timer and send a further handshake message to the second bearer network resource manager when the first KA timer is timed out, and to determine a connection status according to the timeout times of the first KA timer" in page 7, lines 14-17 . There is insufficient antecedent basis for this limitation in the claim.

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7. Claim 25 recites the limitation " sending a further handshake message to the peer bearer network resource manager" in page 9, lines 14-15. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 21-23, 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (Pub. No.: US 2003/0009580 A1) in view of Nandagopalan et al. (Pub. No.: US 2003/0093526 A1), and in further view of Betts et al. (Pub No.: US 2005/0152286 A1).

Regarding to claim 21, Chen '580 disclose a communication network comprising: a first bearer network resource manager (figure 1, SLA-based Policy control in Service Domain A) (figure 2, RAN Bearer Access Policy Enforcement Interface Controller 20); and a second bearer network resource manager in communication with the first bearer network resource manager (figure 1, SLA-based Policy control in Service Domain B) (figure 2, RAN Bearer Access Policy Enforcement Interface Controller 26) a communication network comprising: a first bearer network resource manager (figure 1,

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SLA-based Policy control in Service Domain A) (figure 2, RAN Bearer Access Policy Enforcement Interface Controller 20);

transmit QoS information through the QoS connection to the second bearer network resource manager (figure 4, [0070] [0071] [0073] [0074] [0075] [0078] [0079] [0080] [0081] QoS request, QoS Accept, QoS Agree);

and wherein the first bearer network resource manager and the second bearer network resource manager are configured to control and manage resources according to the QoS information (figure 4, [0070] [0071] [0073] [0074] [0075] [0078] [0079] [0080] [0081] QoS request, QoS Accept, QoS Agree).

However, Chen '580 are silent to disclosing wherein the first bearer network resource manager is configured to: send an establish connection request to the second bearer network resource manager for requesting to create a QoS connection between the first bearer network resource manager and the second bearer network resource manager; receive an establish connection response from the second bearer network resource manager so as to create the QoS connection.

Nandagopalan '526 disclose wherein the first bearer network resource manager is configured to: send an establish connection request to the second bearer network resource manager for requesting to create a QoS connection between the first bearer network resource manager and the second bearer network resource manager; receive an establish connection response from the second bearer network resource manager so as to create the QoS connection (page 11, claim 2, creating a connection response message... QoS in the response).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use a local bearer network resource manager sending an establish connection request to a peer bearer network resource manager for requesting to create a QoS connection between the local bearer network resource manager and the peer bearer network resource manager; the local bearer network resource manager receiving an establish connection response from the peer bearer network resource manager so as to create the QoS connection taught by Nandagopalan '526 into the communication network (figure 1) of Chen '580. A local bearer network resource manager sending an establish connection request to a peer bearer network resource manager for requesting to create a QoS connection between the local bearer network resource manager and the peer bearer network resource manager; the local bearer network resource manager receiving an establish connection response from the peer bearer network resource manager so as to create the QoS connection can be implemented into the communication network (figure 1) of Chen '580 to create QoS connection. The motivation for using a local bearer network resource manager sending an establish connection request to a peer bearer network resource manager for requesting to create a QoS connection between the local bearer network resource manager and the peer bearer network resource manager; the local bearer network resource manager receiving an establish connection response from the peer bearer network resource manager so as to create the QoS connection being that improved Quality of Service (QoS) signaling for an Medium Access Control (MAC) layer in a wireless local area network (WLAN) (Nandagopalan '526, [0012]).

However, the combined system (Chen '580 - Nandagopalan '526) are silent to disclose create a first Keep Active (KA) timer, add 1 to timeout times of the first KA timer and send a further handshake message to the second bearer network resource manager when the first KA timer is timed out, and to determine a connection status according to the timeout times of the first KA timer, wherein the second bearer network resource manager is configured to, create a second Keep Active (KA) timer, restart the second KA timer and return a handshake response to the first bearer network resource manager after receiving the further handshake message, and to determine a connection status according to whether the second KA timer is timed out.

Betts '286 from the same or similar fields of endeavor disclose create a first Keep Active (KA) timer, add 1 to timeout times of the first KA timer and send a further handshake message to the second bearer network resource manager when the first KA timer is timed out, and to determine a connection status according to the timeout times of the first KA timer, wherein the second bearer network resource manager is configured to, create a second Keep Active (KA) timer, restart the second KA timer and return a handshake response to the first bearer network resource manager after receiving the further handshake message, and to determine a connection status according to whether the second KA timer is timed out (Figure 4, paragraph [0074] the timer T1 expires, a new handshake message is send and timer T1 is restarted, adds overtime to the timer T1).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply create a first Keep Active (KA) timer, add 1 to timeout times of the

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first KA timer and send a further handshake message to the second bearer network resource manager when the first KA timer is timed out, and to determine a connection status according to the timeout times of the first KA timer, wherein the second bearer network resource manager is configured to, create a second Keep Active (KA) timer, restart the second KA timer and return a handshake response to the first bearer network resource manager after receiving the further handshake message, and to determine a connection status according to whether the second KA timer is timed out taught by Betts '286 into the combined system (Chen '580 - Nandagopalan '526); since Betts '286 recited the motivation in the paragraph [0009] which is used to repair the routing table on a timed basis due to the above first shortcoming.

Regarding to claim 22, Chen '580 disclose the limitations of claim 21 above.

However, Chen '580 are silent to disclosing wherein the first bearer network resource manager is further configured to periodically send a handshake message to the second bearer network resource manager, and to determine a connection status according to a handshake response returned by the second bearer network resource manager

Nandagopalan '526 disclose wherein the first bearer network resource manager is further configured to periodically send a handshake message to the second bearer network resource manager, and to determine a connection status according to a handshake response returned by the second bearer network resource manager (page 11, claim 11, the establish connection request...the establish connection response).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to apply wherein information carried in the handshake message includes comprises connection ID information and connection resource state information taught by Nandagopalan '526 into the communication system of Chen '580, since Nandagopalan '526 recited the motivation in the paragraph [0012] which improved Quality of Service (QoS) signaling for an Medium Access Control (MAC) layer in a wireless local area network (WLAN).

Regarding to claim 23, Chen '580 disclose the limitations of claim 21 above.

However, Chen '580 are silent to disclosing wherein the second bearer network resource manager is configured to judge whether an identity of the first bearer network resource manager is valid, and if valid, send the establish connection response to the first bearer network resource manager.

Nandagopalan '526 disclose wherein the second bearer network resource manager is configured to judge whether an identity of the first bearer network resource manager is valid, and if valid, send the establish connection response to the first bearer network resource manager (page 11, claim 11, the establish connection request...the establish connection response).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to apply wherein information carried in the handshake message includes comprises connection ID information and connection resource state information taught by Nandagopalan '526 into the communication system of Chen '580,

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since Nandagopalan '526 recited the motivation in the paragraph [0012] which improved Quality of Service (QoS) signaling for an Medium Access Control (MAC) layer in a wireless local area network (WLAN).

Regarding to claim 25, Chen '580 disclose a method implemented by a bearer network resource manager in a bearer network, the method comprising: transmitting QoS information through the QoS connection to the peer bearer network resource manager; and controlling and managing a resource in the bearer network according to the QoS information (figure 4, [0070] [0071] [0073] [0074] [0075] [0078] [0079] [0080] [0081] QoS request, QoS Accept, QoS Agree).

Chen '580 disclose all the subject matter of the invention above with the exception of sending an establish connection request for requesting to create a QoS connection to a peer bearer network resource manager; receiving an establish connection response from the peer bearer network resource manager so as to create the QoS connection.

Nandagopalan '526 disclose sending an establish connection request for requesting to create a QoS connection to a peer bearer network resource manager; receiving an establish connection response from the peer bearer network resource manager so as to create the QoS connection (page 11, claim 2, creating a connection response message... QoS in the response).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use a local bearer network resource manager sending an

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establish connection request to a peer bearer network resource manager for requesting to create a QoS connection between the local bearer network resource manager and the peer bearer network resource manager; the local bearer network resource manager receiving an establish connection response from the peer bearer network resource manager so as to create the QoS connection taught by Nandagopalan '526 into the communication network (figure 1) of Chen '580. A local bearer network resource manager sending an establish connection request to a peer bearer network resource manager for requesting to create a QoS connection between the local bearer network resource manager and the peer bearer network resource manager; the local bearer network resource manager receiving an establish connection response from the peer bearer network resource manager so as to create the QoS connection can be implemented into the communication network (figure 1) of Chen '580 to create QoS connection. The motivation for using a local bearer network resource manager sending an establish connection request to a peer bearer network resource manager for requesting to create a QoS connection between the local bearer network resource manager and the peer bearer network resource manager; the local bearer network resource manager receiving an establish connection response from the peer bearer network resource manager so as to create the QoS connection being that improved Quality of Service (QoS) signaling for an Medium Access Control (MAC) layer in a wireless local area network (WLAN) (Nandagopalan '526, [0012]).

However, the combined system (Chen '580 - Nandagopalan '526) are silent to disclosing creating a local Keep Active (KA) timer; adding I to timeout times of the local

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KA out; sending a further handshake message to the peer bearer network resource manager; and determining a connection status according to the timeout times of the local KA timer.

Betts '286 from the same or similar fields of endeavor disclose creating a local Keep Active (KA) timer; adding I to timeout times of the local KA out; sending a further handshake message to the peer bearer network resource manager; and determining a connection status according to the timeout times of the local KA timer (Figure 4, paragraph [0074] the timer T1 expires, a new handshake message is send and timer T1 is restarted, adds overtime to the timer T1).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply creating a local Keep Active (KA) timer; adding I to timeout times of the local KA out; sending a further handshake message to the peer bearer network resource manager; and determining a connection status according to the timeout times of the local KA timer taught by Betts '286 into the combined system (Chen '580 - Nandagopalan '526); since Betts '286 recited the motivation in the paragraph [0009] which is used to repair the routing table on a timed basis due to the above first shortcoming.

Regarding to claim 26, Chen '580 disclose all limitations of claim 25 above.

However, Chen '580 are silent to disclosing periodically sending a handshake message to the peer bearer network resource manager; and determining a connection

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status according to a handshake response returned by the peer bearer network resource manager.

Nandagopalan '526 disclose periodically sending a handshake message to the peer bearer network resource manager; and determining a connection status according to a handshake response returned by the peer bearer network resource manager (page 11, claim 11, periodically sending the establish connection request...the establish connection response).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to apply wherein information carried in the handshake message includes comprises connection ID information and connection resource state information taught by Nandagopalan '526 into the communication system of Chen '580, since Nandagopalan '526 recited the motivation in the paragraph [0012] which improved Quality of Service (QoS) signaling for an Medium Access Control (MAC) layer in a wireless local area network (WLAN).

### ***Allowable Subject Matter***

10. Claims 1-5, 8, 10-16, 20 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: Claim 1 is allowed. The prior art fails to disclose after receiving the further handshake message, the peer bearer network resource manager restarting the peer KA timer and returning a handshake response to the local bearer network resource

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manager, and

C4. the local bearer network resource manager determining the connection status according to the timeout times of the local KA timer, the peer bearer network resource manager determining the connection status according to whether the peer KA timer is timed out

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571)272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sheikh Ayaz can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Chuong. T. Ho./

Examiner, Art Unit 2419

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2419